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TAKEUCHI JUNICHI**(54) ELECTROSTATIC CHUCK MEMBER AND PRODUCTION THEREOF****(57)Abstract:**

PROBLEM TO BE SOLVED: To obtain an electrostatic chuck member having high volume resistivity with low fluctuation in which the quality is stabilized by providing an undercoat on a metal substrate through metallic spraying and then providing a ceramic spray coating containing a specified compound thereon.

SOLUTION: An undercoat is provided on a metal substrate through metallic spraying and a coating of $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic containing a $\text{TiO}_2\text{n-}$ ($\text{n}=1-9$) type compound is provided thereon by spraying. The metallic spray coating is 30-150 μm thick and the $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic spray coating containing a $\text{TiO}_2\text{n-1}$ ($\text{n}=1-9$) type compound is 50-500 μm . The $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic spray coating containing a $\text{TiO}_2\text{n-1}$ ($\text{n}=1-9$) type compound has porosity of 0.4-3.0% and surface roughness R_a of 0.1-2.0 μm . The $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic spray coating has a hole sealing layer on the surface and the volume resistivity thereof is in the range of 1×10^{-9} - $1\times 10^{11}\Omega\cdot\text{cm}$.